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EXAMINER	
BOKHARI, SYED M	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/505,444	SIMONIS, HELMUT MATTHIAS	
	Examiner	Art Unit	
	Syed Bokhari	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 02 May 2005.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-28 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) 1-28 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date 05/18/2005 and 09/01/2004.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

> 1. Determining the scope and contents of the prior art.
> 2. Ascertaining the differences between the prior art and the claims at issue.
> 3. Resolving the level of ordinary skill in the pertinent art.
> 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1, 5-7, and 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over San Filippo III (USP 7,068,630) in view of Lin et al. (USP 5,917,806).

San Filippo, III discloses a communications systems for measuring load between devices for use in determining path with optimal throughput with the following features: regarding claim 1, a method of calculating traffic values in a communication network (Fig. 1, communication system employing load measurement, see “node measure its own load and communicates its load to neighboring nodes” recited in column 1 lines 62-67 and column 2 lines 1-7), the communications network comprising a plurality of nodes the nodes being connected to one another by links the method comprising (Fig. 1, communication system employing load measurement, see “system having a plurality of nodes connected to each other” recited in column 1 lines 54-62), obtaining traffic data measurements through the nodes and/or links in an initial scenario as input data (Fig. 1, communication system employing load measurement, see “monitoring and measuring the load of each of communication links ” recited in column 2 lines 47-60); regarding claim 5, further comprising the step of verifying the consistency of the measured input data (Fig. 1, communication system employing load measurement, see “load measurement is determined with accuracy with synchronized period of load” recited in column 2 lines 61-67 and column 3 lines 1-2) and using information about the network topology and/or the network behavior of the initial scenario (Fig. 1, communication system employing load measurement, see “the load measurement elements each monitor the traffic on the point to point paths between their associated e-radio, poletop and wireless modem” recited in column 2 lines 23-39);

San Filippo, III does not disclose the following features: regarding claim 1, deriving a traffic flow model for a modified scenario using a plurality of constraints

describing the interdependency of the initial to the modified scenario and calculating values and/or upper and lower bounds of traffic values for the modified scenario from the traffic flow model using the input data; regarding claim 6, wherein the input data are corrected if inconsistencies are detected; regarding claim 7, further comprising solving a linear programming problem with a linear objective function to minimize the data traffic reconciliation (error correction); regarding claim 9, wherein in step (b) the traffic values in the modified scenario are expressed as a linear function of node-to-node flows in the initial scenario; regarding claim 10, wherein traffic values which are not affected by the modification from the initial to the modified scenario are equal to the corresponding input data or corrected input data of the initial scenario; regarding claim 11, wherein the traffic values comprise utilization, overload and/or traffic volume values and regarding claim 12, wherein the constraints comprise linear constraints.

Lin et al. discloses a method and apparatus for balancing the traffic in radio communication system to control congestion with the following features: regarding claim 1, deriving a traffic flow model for a modified scenario using a plurality of constraints describing the interdependency of the initial to the modified scenario (Fig. 3, a flow chart 300 depicts operation of the output controller 110, see "initializing 302 the congestion model with preprogrammed stored in the memory 210" recited in column 5 lines 26-51) and calculating values and/or upper and lower bounds of traffic values for the modified scenario from the traffic flow model using the input data (Fig. 2, output controller 110, see "identify and determine for possible source of congestion from incoming traffic" recited in column 3 lines 44-66); regarding claim 6,

wherein the input data are corrected if inconsistencies are detected (Fig. 1, radio communication system, see "detecting early warning from incoming traffic exceeding limit and correcting it" recited in column 1 lines 41-49); regarding claim 7, further comprising solving a linear programming problem with a linear objective function to minimize the data traffic reconciliation (error correction) (Fig. 1, radio communication system, see "utilizes error detection and error correction techniques" recited in column 3 lines 3-12); regarding claim 9, wherein in step (b) the traffic values in the modified scenario are expressed as a linear function of node-to-node flows in the initial scenario (Fig. 3, operation 300 of output controller 110, see "maintain a congestion model comprising plurality of congestion dependencies and relieve congestion by increasing output resources and decreasing traffic rates" recited in column 1 line 67 and column 2 lines 1-16); regarding claim 10, wherein traffic values which are not affected by the modification from the initial to the modified scenario are equal to the corresponding input data or corrected input data of the initial scenario (Fig. 2, output controller 110, see "in a multi-state congestion control strategy, the stable state does not indicate any potential or real congestion" recited in column 4 lines 43-53); regarding claim 11, wherein the traffic values comprise utilization, overload and/or traffic volume values (Fig. 2, output controller 110, see "congestion dependencies being utilized to successfully resolve the impending congestion" recited in column 4 lines 4-15) and regarding claim 12, wherein the constraints comprise linear constraints (Fig. 2, output controller 110, see "the most important statistics includes latency, throughput, message reties and load distribution" recited in column 4 lines 16-39).

It would have been obvious to one of the ordinary skill in the art at the time of invention to modify the system of San Filippo, III by using the features, as taught by Lin et al. et al., in order to provide a traffic flow model for a modified scenario using a plurality of constraints, calculating values and/or upper and lower bounds of traffic values, solving a linear programming problem with a linear objective function to minimize the data traffic reconciliation, the traffic values in the modified scenario expressed as a linear function of node-to-node flows, traffic values comprise utilization, overload and/or traffic volume values and the constraints comprise linear constraints. The motivation of using these functionalities is to enhance the system in a cost effective manner.

4. Claims 2-3, 8, 15, 17, 19, 23, 24-26 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over San Filippo III (USP 7,068,630) in view of Lin et al. (USP 5,917,806) as applied to claim 1 above, and further in view of Misra (USP 7,162,250 B2).

San Filippo III discloses the following features: and regarding claim 17, a method of calculating traffic values in a communications network (Fig. 1, communication system employing load measurement, see "node measure its own load and communicates its load to neighboring nodes" recited in column 1 lines 62-67 and column 2 lines 1-7), the communications networking comprising a plurality of nodes the nodes being connected to one another by links, the method comprising (Fig. 1, communication system

employing load measurement, see "system having a plurality of nodes connected to each other" recited in column 1 lines 54-62), obtaining data traffic data measurements through the nodes and/or links in an initial scenario as input data (Fig. 1, communication system employing load measurement, see "monitoring and measuring the load of each of communication links " recited in column 2 lines 47-60) regarding claim 26, an apparatus for calculating traffic values in a communications network (Fig. 2, output controller 110, see "identify and determine for possible source of congestion from incoming traffic" recited in column 3 lines 44-66).

San Filippo III does not disclose the following features: regarding claim 17, considering a modified scenario and deriving a traffic flow model using the input data and the relations for calculating the solution variables; regarding claim 19, wherein the solution variables can be expressed as a linear function of one or more node-to-node flows of the network; regarding claim 23, further comprising repeating stages (b), (c) and (d) for different modifications of the network and regarding claim 28, a computer program for performing the method of claim 1 when operated in a computer system.

Lin et al. discloses the following features: regarding claim 17, considering a modified scenario (Fig. 3, a flow chart 300 depicts operation of the output controller 110, see "initializing 302 the congestion model with preprogrammed stored in the memory 210" recited in column 5 lines 26-31), deriving a traffic flow model using the input data and the relations for calculating the solution variables (Fig. 2, output controller 110, see "identify and determine for possible source of congestion from incoming traffic" recited in column 3 lines 44-66); regarding claim 19, wherein the solution variables can be

expressed as a linear function of one or more node-to-node flows of the network (Fig. 3, operation 300 of output controller 110, see “maintain a congestion model comprising plurality of congestion dependencies and relieve congestion by increasing output resources and decreasing traffic rates” recited in column 1 line 67 and column 2 lines 1-16); regarding claim 23, further comprising repeating stages (b), (c) and (d) for different modifications of the network (Fig. 2, output controller 110, see “identify and determine for possible source of congestion from incoming traffic” recited in column 3 lines 44-66) and regarding claim 28, a computer program for performing the method of claim 1 when operated in a computer system (Fig. 2, output controller 110, see “processing system 204 comprises a processor 208 for executing the operations and a memory 210 for storing executable software elements for programming the processor 208” recited in column 3 lines 13-43).

It would have been obvious to one of the ordinary skill in the art at the time of invention to modify the system of San Filippo, III by using the features, as taught by Lin et al. et al., in order to provide a modified scenario and deriving a traffic flow model using the input data and the relations for calculating the solution variables, repeating stages for different modifications of the network and a computer program for performing the method of claim 1 when operated in a computer system. The motivation of using these functionalities is to enhance the system in a cost effective manner.

San Filippo II and Lin et al. disclose the claimed limitations as described in paragraph 3 above, San Filippo III and Lin et al. do not disclose the following features: regarding claim 17, defining one or more solution variables for the modified scenario

and determining constraints between traffic flows through the links and nodes to describe the network topology and behavior of the network; regarding claim 2, wherein the modified scenario comprises one or more of: a modified network topology, modified routing algorithm parameters, modified traffic engineering constraints and/or modified traffic load compared to the initial scenario and claim 3, wherein the constraints are derived from the network topology and network behavior of the initial network; regarding claim 8, further comprising solving a linear programming problem with a non-linear objective function to minimize the data traffic reconciliation (error correction) and regarding claim 15, further comprising: selecting a first and a second node; solving a first linear programming problem by computing the upper bound of traffic flow values from the first to the second node; and solving a second linear programming problem by computing the lower bound of traffic flow values from the first to the second set of nodes; regarding claim 17, defining one or more solution variables for the modified scenario and determining constraints between traffic flows through the links and nodes to describe the network topology and behavior of the network; regarding claim 24, further comprising calculating a minimal and a maximal value for each solution variable taking into account one or more of the different modifications and regarding claim 25, further comprising calculating one consistent solution for all solution variables taking into account all the modifications

Misra discloses a method and apparatus for load sharing in wireless access networks with the following features: regarding claim 2, wherein the modified scenario comprises one or more of a modified network topology, modified routing algorithm

parameters, modified traffic engineering constraints and/or modified traffic load compared to the initial scenario (Fig. 4, depicting the basic sequence of steps performed in load balancing, see "modification of cellular layout based on traffic load or congestion" recited in column 3 lines 25-39) and claim 3, wherein the constraints are derived from the network topology and network behavior of the initial network (Fig. 5, central point of control for power adjustment process, see "dynamic variation of cellular network topology under variable traffic loads" recited in column 4 lines 5-9); regarding claim 8, further comprising solving a linear programming problem with a non-linear objective function to minimize the data traffic reconciliation (error correction) (Fig. 5, sequence of steps performed by load balancing manager (LBM), see "LBM retrieves the topographical layout of APs, determine the set of neighbors step 504" recited in column 9 lines 46-60) and regarding claim 15, further comprising selecting a first and a second node (Fig. 4, sequence of steps performed in the load balancing solution, see "access point (AP) attached to one or more client" recited in column 8 lines 11-20), solving a first linear programming problem by computing the upper bound of traffic flow values from the first to the second node (Fig. 5, sequence of steps performed by load balancing manager (LBM), see "LBM determine appropriate load level (step 501), compare them against threshold (step 502) and computes AP power adjustment (step 505)" recited in column 9 lines 26-66) and solving a second linear programming problem by computing the lower bound of traffic flow values from the first to the second set of nodes (Fig. 4, sequence of steps performed in the load balancing solution, see "detection of under load conditions (step 403) and increasing of AP power (step 404)" recited in column 8

lines 21-46); regarding claim 17, defining one or more solution variables for the modified scenario (Fig. 4, depicting the basic sequence of steps performed in load balancing, see "modification of cellular layout based on traffic load or congestion" recited in column 3 lines 25-39) and determining constraints between traffic flows through the links and nodes to describe the network topology and behavior of the network (Fig. 5, central point of control for power adjustment process, see "dynamic variation of cellular network topology under variable traffic loads" recited in column 4 lines 5-9); regarding claim 24, further comprising calculating a minimal and a maximal value for each solution variable taking into account one or more of the different modifications (Fig. 5, sequence of steps performed by load balancing manager (LBM), see "LBM determine appropriate load level (step 501), compare them against threshold (step 502) and regarding claim 25, further comprising calculating one consistent solution for all solution variables taking into account all the modifications (Fig. 4, depicting the basic sequence of steps performed in load balancing, see "modification of cellular layout based on traffic load or congestion" recited in column 3 lines 25-39 and column 8 lines 21-46).

It would have been obvious to one of the ordinary skill in the art at the time of invention to modify the system of San Filippo III with Lin et al. by using the features, as taught by Misra, in order to provide defining and determining constraints between traffic flows through the links and nodes to describe the network topology and behavior of the network; the modified scenario comprises of a modified network topology, modified routing algorithm parameters, modified traffic engineering constraints and/or modified traffic load compared to the initial scenario, solving a linear programming problem with a

non-linear objective function to minimize the data traffic reconciliation, selecting a first and a second node solving a first linear programming problem by computing the upper bound of traffic flow values from the first to the second node, solving a second linear programming problem by computing the lower bound of traffic flow values from the first to the second set of nodes, defining one or more solution variables for the modified scenario and determining constraints between traffic flows, calculating a minimal and a maximal value for each solution variable taking into account one or more of the different modifications and calculating one consistent solution for all solution variables taking into account all the modifications. The motivation using these functionalities is to enhance the system in a cost effective manner.

5. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over San Filippo III (USP 7,068,630) in view of Lin et al. (USP 5,917,806) as applied to claim 1 above, further in view of Misra (USP 7,162,250 B2) and further in view of Hamada (USP 7,206,289 B2).

San Filippo, Lin et al. and Misra describe the claimed limitations as discussed in paragraph 4 above. San Filippo, Lin et al. and Misra do not disclose the following features: regarding claim 27, a network management system for managing a network comprising a plurality of nodes the nodes being interconnected by links management system comprising and the network and means for measuring the data traffic input into and output from nodes and links and the apparatus.

Hamada discloses a communication system for calculating traffic from data on packet transmission collected from routers with the following features: Regarding claim 27, a network management system for managing a network comprising a plurality of nodes the nodes being interconnected by links management system comprising (Fig. 1, telecommunications network, see “includes a NMS (Network Management System 100” recited in column 3 lines 11-20), the network and means for measuring the data traffic input into and output from nodes and links and the apparatus (Fig. 1 and Fig. 2, NMS connection to routers and links, see “NMS 100 send out a information collection request to the router” recited in column 3 lines 38-47).

It would have been obvious to one of the ordinary skill in the art at the time of invention to modify the system of San Filippo III with Lin et al. by using the features, as taught by Hamada, in order to provide a network management system for managing a network comprising a plurality of nodes the nodes being interconnected by links management system comprising and the network and means for measuring the data traffic input into and output from nodes and links and the apparatus. The motivation using the network management system capabilities is to enhance the system in a cost effective manner.

6. Claims 4, 18, 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over San Filippo III (USP 7,068,630) in view of Lin et al. (USP 5,917,806) as applied to claims 1 and 17 above, further in view of Misra (USP 7,162,250 B2) and further in view of Basturk (USP 7,111,074 B2).

San Filippo III, Lin et al. and Misra describe the claimed limitations as discussed in paragraph 4 and 5 above. San Filippo III, Lin et al. and Misra do not disclose the following features: regarding claim 4, wherein step (b) further comprises performing a routing procedure in the modified scenario; regarding claim 18, wherein further comprises performing a routing process for the modified scenario; regarding claim 21, wherein the constraints comprising any of the following constraints: routing-based constraints link-based constraints node-based constraints error-based constraints and regarding claim 22, wherein the constraints relate to any of the following the size of data packets used in the network; relationship between the number of data packets and the data traffic volume; constraints determined by the routing protocol used in the network; the relationship between incoming and outgoing data traffic at the plurality of nodes; the relationship between the data traffic at both ends of each link; the relationship between the data traffic along the routes and the data traffic input into and output from the network.

Basturk discloses communication system for controlled data path load balancing on a data packet network with the following features: regarding claim 4, wherein step (b) further comprises performing a routing procedure in the modified scenario (Fig. 1, route computing sequence, see "each router broadcasts the state of every router's adjacent link to every other router in the network topology" recited in column 1 lines 19-29 in background of the invention); regarding claim 18, wherein further comprises performing a routing process for the modified scenario (Fig. 1, route computing sequence, see

"each router broadcasts the state of every router's adjacent link to every other router in the network topology" recited in column 1 lines 19-29 in background of the invention); regarding claim 21, wherein the constraints comprising any of the following constraints: routing-based constraints link-based constraints node-based constraints error-based constraints (Fig.2, route computing sequence using label affecting data route determination, see "link costs to be incurred per data link between the nodes" recited in column 2 lines 47-55) and regarding claim 22, wherein the constraints relate to any of the following the size of data packets used in the network; relationship between the number of data packets and the data traffic volume; constraints determined by the routing protocol used in the network; the relationship between incoming and outgoing data traffic at the plurality of nodes; the relationship between the data traffic at both ends of each link; the relationship between the data traffic along the routes and the data traffic input into and output from the network

It would have been obvious to one of the ordinary skill in the art at the time of invention to modify the system of San Filippo III with Lin et al. and with Misra by using the features, as taught by Basturk, in order to provide further performing a routing procedure, the constraints comprising any of routing-based constraints link-based constraints node-based constraints error-based constraints, the constraints relate to any of the following the size of data packets used in the network; relationship between the number of data packets and the data traffic volume, constraints determined by the routing protocol used in the network; the relationship between incoming and outgoing data traffic at the plurality of nodes the relationship between the data traffic at both ends

of each link and the relationship between the data traffic along the routes and the data traffic input into and output from the network. The motivation using the network management system capabilities is to enhance the system in a cost effective manner.

7. Claims 13-14 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over San Filippo III (USP 7,068,630) in view of Lin et al. (USP 5,917,806) as applied to claims 1 and 17 above, further in view of Misra (USP 7,162,250 B2) and further in view of Baumann et al. (US 7,047,309 B2).

San Filippo III, Lin et al. and Misra describe the claimed limitations as discussed in paragraph 4 and 5 above. San Filippo III, Lin et al. and Misra do not disclose the following features: regarding claim 13, wherein the constraints comprise non-linear constraints; regarding claim 14, wherein a linear approximation to a non-linear constraint is used; regarding claim 20, wherein the constraints in step (b) include relations among data traffic rates based on the definition of network protocol (such as IP, TCP, UDP) which defines the network behavior.

Baumann et al. discloses communication system for load balancing and dynamic control of multiple data streams with the following features: regarding claim 13, wherein the constraints comprise non-linear constraints (Fig. 1, data processing system network, see "non-linear constrains on the network include data distribution like text, code, images, video, audio mix and differences in equipment performance and user skill to operate" recited in column 1 lines 22-44 in background of the invention); regarding claim

14, wherein a linear approximation to a non-linear constraint is used (Fig. 1, data processing system network, see "performance is tracked and number and data stream dynamically modified as conditions in the network infrastructure" recited in column 3 lines 4-16); regarding claim 20, wherein the constraints in step (b) include relations among data traffic rates based on the definition of network protocol (such as IP, TCP, UDP) which defines the network behavior (Fig. 3, a system performing large data transfer over the Internet, see "available bandwidth utilization during transfer of large data stream over a TCP/IP network" recited in column 3 lines 4-5 and column 1 lines 31-34).

It would have been obvious to one of the ordinary skill in the art at the time of invention to modify the system of San Filippo III with Lin et al. and with Misra by using the features, as taught by Baumann et al., in order to provide the constraints comprise non-linear constraints, a linear approximation to a non-linear constraint is used and the constraints include relations among data traffic rates based on the definition of network protocol (such as IP, TCP, UDP) which defines the network behavior. The motivation using the network management system capabilities is to enhance the system in a cost effective manner.

8. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over San Filippo III (USP 7,068,630) in view of Lin et al. (USP 5,917,806) as applied to claim 1 above, and further in view of Takase et al. (USP 5,042,027).

San Filippo II and Lin et al. disclose the claimed limitations as described in paragraph 3 above, San Filippo III and Lin et al. do not disclose the following features: regarding claim 16, further comprising repeating step (a) at different times and/or at periodic intervals.

Takase et al. discloses a communication system for controlling the load on the network with the following features: regarding claim 16, further comprising repeating step (a) at different times and/or at periodic intervals (Fig.1, communication node, call controller and network controller, see "the measurements are continuously made a constant period of time" recited in column 5 lines 35-44).

It would have been obvious to one of the ordinary skill in the art at the time of invention to modify the system of San Filippo III with Lin et al. and with Misra by using the features, as taught by Takase et al., in order to provide a linear approximation to a non-linear constraint and the constraints include relations among data traffic rates based on the definition of network protocol (such as IP, TCP, UDP) which defines the network behavior. The motivation using the network management system capabilities is to enhance the system in a cost effective manner.

Conclusion

1. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 6,970,429 B2 (Arsikere et al.), US 2003/0007484 A1 (Beshai), US 6,842,463 B1 (Drwiega et al.), US 6,108,303 (Fahmi et al.), US 2003/0095501 A1 (Hofner et al.) and US 7,106,696 B1 (Lim et al.).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Syed Bokhari whose telephone number is (571) 270-3115. The examiner can normally be reached on Monday through Friday 8:00-17:00 Hrs..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kwang B. Yao can be reached on (571) 272-3182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KWANG BIN YAO
SUPERVISORY PATENT EXAMINER